DH-500

Computational Social Media

Gatica-Perez Daniel

Cursus	Sem.	Type
Digital Humanities	MA2, MA4	Obl.
Digital Humanities		Opt.
Electrical Engineering		Opt.
Learning Sciences		Opt.
Managmt, tech et entr.	MA2, MA4	Opt.
Minor in digital humanities, media and society	E	Opt.

Language of teaching	English
Credits	4
Session	Summer
Semester	Spring
Exam	During the semester
Workload	120h
Weeks	14
Hours	**3 weekly**
Courses	2 weekly
Project	1 weekly
Number of positions	

Summary

The course integrates concepts from media studies, machine learning, multimedia, and network science to characterize social practices and analyze content in platforms like Twitter/X, Instagram, YouTube, and TikTok. Students will learn methods to understand socio-technical phenomena in social media.

Content

The course will present a human-centered view of computational social media. It uses a multidisciplinary approach and integrates concepts from media studies, multimedia information systems, machine learning, and network science to present the socio-technical fundamentals needed to understand user motivations and behavior, and analyze content in platforms like Twitter/X, Instagram, YouTube, and TikTok. Students will learn approaches for classification, discovery, and interpretation of phenomena in social media.
The content is organized around trends in social media, introducing concepts and models of general applicability.
1. Introduction. A brief history of social media. Networked individualism.
2. Friending. A human-centered review of social network research. Users, communities, and networks. Privacy and the real-name web.
3. Tweeting. From random chatter to worldwide pulse. Followers, hashtags, events, and network effects. Analyzing real-life phenomena on information networks. Misinformation in social media.
4. Shooting. Photo sharing and tagging. Media, user and community analysis enabled by photo sharing. Ephemeral social media.
5. Moving. Location-based social networks. Individual and network phenomena revealed by mobility data. Urban computing.
6. Watching. Social video as a media phenomenon. Multimodality in social video. Attention and social video.
7. Crowdsourcing. Crowdsourced tasks and crowdworkers. Uses of crowdsourcing in social media research. Crowdsourcing and social participation. Content moderation.
8. The Future. Social media and AI from a global perspective. Effects of social media on society and the environment. Fairness, Accountability, Transparency, and Ethics in social media.

Learning Outcomes

Transversal skills

- Give feedback (critique) in an appropriate fashion.
- Respect relevant legal guidelines and ethical codes for the profession.
- Make an oral presentation.
- Summarize an article or a technical report.
- Demonstrate a capacity for creativity.

- Demonstrate the capacity for critical thinking
- Write a scientific or technical report.

Assessment methods

Multiple methods during the semester: homeworks; paper presentation and group discussion, and group project.

Resources

Moodle Link

- https://go.epfl.ch/DH-500